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**2 DSM 14464** 33790 Halle/Kunsebeck Date of the deposit or the transfer' : 2001-08-  
22 III. VIABILITY STATEMENT The viability of the microorganism identified ...  
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## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	top10/pxk99edead	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:43
L2	2	"DSM 14464"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:43
L3	2	I1 or I2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:43
L4	0	top/pxk99edead	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:43
S1	7	(farwick.in. OR huthmacher.in. OR brehme.in. OR pfefferle.in. OR degussa.as.) and dead and (coryneform OR corynebacterium OR glutamicum)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:00
S2	4	(farwick.in. OR huthmacher.in. OR brehme.in. OR pfefferle.in. OR degussa.as.) and ("DNA helicase" OR "RNA helicase" OR "DNA/RNA helicase") and (coryneform OR corynebacterium OR glutamicum)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 09:59
S3	0	S2 not S1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 09:59
S4	4	(farwick.in. OR huthmacher.in. OR brehme.in. OR pfefferle.in. OR degussa.as.) and helicase and (coryneform OR corynebacterium OR glutamicum)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 09:59
S5	0	S4 not (S2 or S1)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:00
S6	52	((dead near2 gene) OR helicase) same (coryneform OR corynebacterium OR glutamicum)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:04

## EAST Search History

S7	2	(dead.clm. OR helicase.clm.) same (coryneform OR corynebacterium OR glutamicum)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/10/30 10:26
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*gent*  
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(71) Applicant: DEGUSSA AG [DE/DE]; Bennigsenplatz 1, 40474 Düsseldorf (DE).

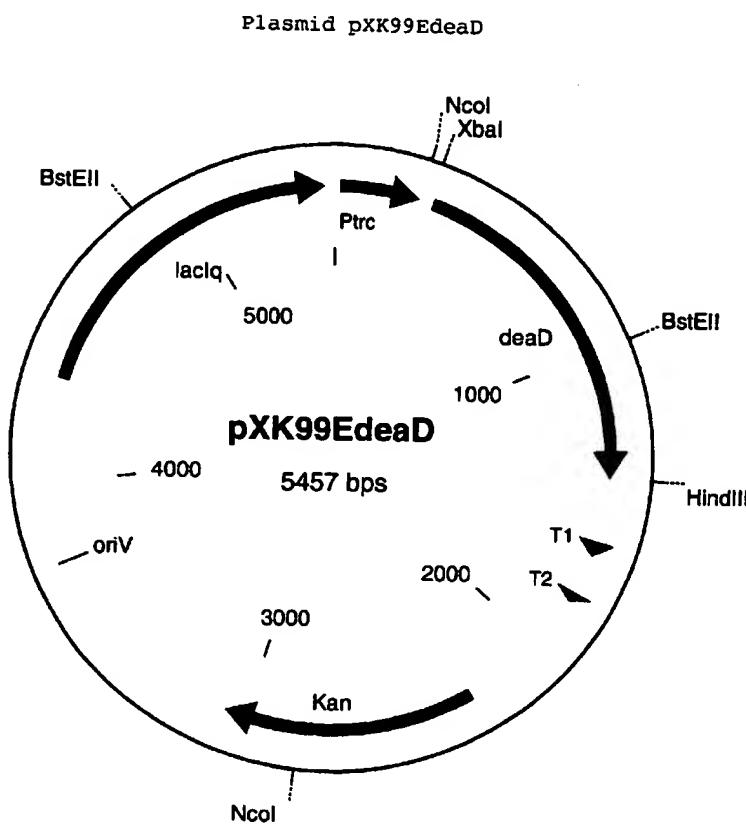
(72) Inventors: FARWICK, Mike; Gustav-Adolf-Strasse 11, 33615 Bielefeld (DE). HUTHMACHER, Klaus; Lärchenweg 18, 63584 Gelnhausen (DE). BREHME, Jennifer; Kastanienstrasse 10, 33649 Bielefeld (DE). PFEFFERLE, Walter; Jahnstrasse 33, 33790 Halle (Westf.) (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

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[Continued on next page]

(54) Title: NUCLEOTIDE SEQUENCES WHICH CODE FOR THE DEAD GENE



(57) Abstract: The invention relates to an isolated polynucleotide comprising a polynucleotide sequence chosen from the group consisting of a) polynucleotide which is identical to the extent of at least 70% to a polynucleotide which codes for a polypeptide which comprises the amino acid sequence of SEQ ID No. 2, b) polynucleotide which codes for a polypeptide which comprises an amino acid sequence which is identical to the extent of at least 70% to the amino acid sequence of SEQ ID No. 2, c) polynucleotide which is complementary to the polynucleotides of a) or b), and d) polynucleotide comprising at least 15 successive nucleotides of the polynucleotide sequence of a), b) or c), and a process for the fermentative preparation of L-amino acids using coryneform bacteria in which at least the *deAD* gene is present in attenuated form, and the use of polynucleotides which comprise the sequences according to the invention as hybridization probes.

WO 02/26787 A1

## INTERNATIONAL SEARCH REPORT

Int'l Application No

PCT/EP 01/10772

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/34 C12N9/00 C12N15/10 C12N15/63 C12P13/08  
 C12Q1/68 //C12P13/08, C12R1:15)

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 IPC 7 C07K C12N

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EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE, SEQUENCE SEARCH

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 'Online! Accession Number Z77137, 22 July 1996 (1996-07-22) XP002189109 the whole document ---	1-7, 9, 17, 20, 21
X	DATABASE EMBL 'Online! Accession Number AE003878, 18 June 2000 (2000-06-18) XP002189110 the whole document ---	1-7, 9, 17, 20, 21
X	DATABASE EMBL 'Online! Accession Number L08387, 24 December 1992 (1992-12-24) XP002189111 the whole document ---	1-7, 9, 17, 20, 21
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Date of the actual completion of the International search

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	EP 1 108 790 A (KYOWA HAKKO KOGYO KK) 20 June 2001 (2001-06-20) table 1 SEQ ID No.1278 ---	1-7, 17, 20, 21
P,X	EP 1 106 693 A (DEGUSSA) 13 June 2001 (2001-06-13) abstract page 1, line 3 - line 5 examples 1-5 claims 1-18 ---	5, 6, 9, 20, 21
P,X	EP 1 094 111 A (DEGUSSA ;KERNFORSCHUNGSAVLAGE JUELICH (DE)) 25 April 2001 (2001-04-25) page 1, line 3 - line 5 examples 4-8. claims 1-15 ---	5, 6, 9, 20, 21
P,X	EP 1 096 013 A (DEGUSSA) 2 May 2001 (2001-05-02) abstract page 1, line 3 - line 5 examples 1-7 claims 1-16 ---	5, 6, 9, 20, 21
A	KRAMER R: "Genetic and physiological approaches for the production of amino acids", JOURNAL OF BIOTECHNOLOGY, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, VOL. 45, NR. 1, PAGE(S) 1-21 XP004036833 ISSN: 0168-1656 page 3, column 1, paragraph 3 -page 16, column 2, paragraph 2 figures 2-4 ---	10-16, 18, 19
A	EIKMANN B J ET AL: "MOLECULAR ASPECTS OF LYSINE, THREONINE, AND ISOLEUCINE BIOSYNTHESIS IN CORYNEBACTERIUM GLUTAMICUM", ANTONIE VAN LEEUWENHOEK, DORDRECHT, NL, VOL. 64, NR. 2, PAGE(S) 145-163 XP000918559 abstract page 146, column 2, paragraph 4 -page 153, column 2, paragraph 1 ---	10-16, 18, 19

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1a

Claim 1a defines a polynucleotide as comprising a nucleotide sequence that has at least 70% identity to a nucleotide sequence encoding a polypeptide of defined amino acid sequence. Back-translation to the polypeptide in DNA generates a very large number of nucleic acid sequences. For example, a polypeptide of 100 amino acid residues generates 10e47 nucleotide sequences. It is not possible to search an entire database with the entire list of generated nucleotide sequences. The search has been limited to nucleic acid/ nucleic acid, protein/protein and protein/six-frame translated nucleic acid comparisons.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an International preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/10772

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EP 1106693	A	13-06-2001	DE	19959327 A1		13-06-2001
			AU	7198700 A		14-06-2001
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